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PAGES: 6, including cover sheet

COMMENTS: ***COMMENTS ON DRAFT STAFF REPORT FOR THE PROPOSED AMENDMENT TO THE WATER QUALITY CONTROL PLAN FOR THE NORTH COAST REGION TO ESTABLISH EXCEPTION CRITERIA TO THE POINT SOURCE WASTE DISCHARGE PROHIBITIONS BY REVISING THE ACTION PLAN FOR STORM WATER DISCHARGES AND ADDING A NEW ACTION PLAN FOR LOW THREAT DISCHARGES.***

Attached:

Please find the comments of North Coast Rivers Alliance and Russian River Watershed Protection Committee to the above-captioned matter.

FACSIMILE TRANSMITTAL SHEET

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January 29, 2009

VIA FACSIMILE AND U.S. MAIL
(707) 523-0135

Bob Anderson, Chairman
California Regional Water Quality Control Board
North Coast Region
5550 Skyline Blvd., Suite A
Santa Rosa, CA 95403

Re: Comments of North Coast Rivers Alliance and Russian River Watershed Protection Committee on Draft Staff Report for the Proposed Amendment to the Water Quality Control Plan for the North Coast Region to Establish Exception Criteria to the Point Source Waste Discharge Prohibitions by Revising the Action Plan for Storm Water Discharges and Adding a New Action Plan for Low Threat Discharges.

Dear Board Members,

On behalf of the North Coast Rivers Alliance and Russian River Watershed Protection Committee, we appreciate the opportunity to submit comments for the record concerning the Proposed Low Threat Discharge Amendment to the Basin Plan ("Amendment"). We incorporate all comments separately submitted by these organizations and their members.

I. General Comments

We recognize that conserving California's scarce water resources is essential. Nonetheless, we have substantial concerns about the Amendment's reliance on wastewater as the appropriate method of achieving this goal. As the Draft Staff Report notes, wastewater "could contain any number of unidentified pollutants such as pharmaceutical and personal care products and also contains pollutants such as nutrients and salts that could cause problems, especially in low flow streams."

The umbrella term for the pollutants and chemicals that wastewater contains is "emerging contaminants," and includes substances similar to estrogen, antibiotics, and other medical products as well as byproducts from an assortment of other personal care

products like cosmetics and fragrances. Emerging contaminants are not well understood; research into their sources and effects is ongoing.

The U.S. Geological Survey has undertaken a number of studies attempting to quantify the number of emerging contaminants present in our waters. One study, analyzing 139 rivers in 30 states, determined that "[o]ne or more [emerging contaminants] were found in 80 percent of the streams sampled. Half of the streams contained 7 or more [emerging contaminants], and about one-third of the streams contained 10 or more of these chemicals."[1] These emerging contaminants are present in wastewater[2] because wastewater treatment is only designed to remove a limited number of targeted contaminants. However, other processes exist that fully treat wastewater in order to make it potable. For example, Orange County's "Groundwater Replenishment System" uses a three-step process of microfiltration, reverse osmosis, and UV and hydrogen peroxide techniques to allow its treated wastewater to meet federal drinking water standards.[3]

However, construction or utilization of such a system is not contemplated as part of the Amendment.[4] Indeed, the Amendment states on page 25 that "implementation of these measures will . . . result in the highest water quality *consistent with the goals served by this proposed Amendment*." (Emphasis added.) If the Amendment contemplated *fully* treating wastewater, there would be no need to qualify the fact that implementation will lead to "the highest water quality." It appears that the Board has determined that fully treating wastewater is either technologically or financially infeasible. Therefore, *the Amendment will lead to the discharge of partially-treated wastewater containing emerging contaminants.*

Emerging contaminants can wreak ecological havoc. In his testimony before the Committee on Environment and Public Works' Subcommittee on Transportation Safety, Infrastructure Security, and Water Quality, Dr. Robert M. Hirsch, the Associate Director for Water at USGS, stated:

> Endocrine disruption is one adverse health effect of concern because it may occur as a result of exposure to very low levels of hormonally active

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[1] *USGS Fact Sheet FS-027-02, Pharmaceuticals, Hormones, and Other Organic Wastewater Contaminants in U.S. Streams,* United States Geological Survey, *available at* http://toxics.usgs.gov/pubs/FS-027-02/index.html. More complete data is available in the full report, which is available at http://toxics.usgs.gov/pubs/OFR-02-94/index.html.

[2] "Chemicals, used everyday in homes, industry and agriculture, can enter the environment in wastewater." *Id.*

[3] *See* http://www.gwrsystem.com/news/releases/001008GWRSOnline.pdf.

[4] The list of BMPs for recycled water (page 19-20 of Appendix D) only includes structural BMPs designed to minimize the volume of runoff, such as drip irrigation systems and silt fences. Impact 16(b) clearly states that the Amendment "is not . . . expected to require [the construction] of new water or wastewater treatment facilities, or result in the expansion of such facilities."

> chemicals. . . . [F]ish have found to be "feminized" by exposure to a range of chemicals that act similar to the natural hormone estrogen. Some ways in which feminization is observed in fish include: (1) elevation in the percent of fish that are female, (2) changes in behavioral characteristics, such as nesting behavior, or (3) the presence of male fish with female characteristics . . . . A recent study (Kidd et al., 2007) demonstrated that the addition of ethinylestradiol (one of the active ingredients in birth control pills) at observed environmental concentrations to an experimental lake in Canada caused feminization and near extinction of fathead minnows in the lake.
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> * * *
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> The effects of long-term exposure to the low levels of pharmaceuticals found in the environment on human health are not understood and warrant continued study.

Moreover, emerging contaminants frequently combine to form new compounds that may be significantly more dangerous than the sum of their parts.[5] Given that water quality standards currently do not exist for many emerging contaminants, it is impossible to say with confidence that simply ensuring that wastewater meets water quality standards will prevent adverse impacts on human and ecological health. Unfortunately, the CEQA analysis seemed to be predicated on the faulty assumption that preventing such adverse impacts is possible.

II. Environmental Analysis ("EA") Comments

There are two major problems with the EA: (1) inadequate discussion of impacts, and (2) unclear staff review procedures.

Biological Resources Impacts (4(a)-(f)) are all determined to be "less than significant with mitigation," a claim which is unsupported by the evidence. These conclusions are variously based on some combination of the asserted facts that (1) dischargers must "characterize" their waste and the receiving waters, (2) discharges that have an adverse effect on water quality, or a species, or a beneficial use, will not be permitted, and (3) because the discharges are "low threat," they cannot, under the terms of the Amendment, have an adverse effect on water quality. However, as discussed above, it is impossible to demonstrate that discharges of emerging contaminants will not have an adverse effect on water quality or biological resources, for several reasons. First, not enough is known about them to model their effects. Second, what we do know suggests they *do* cause adverse effects.

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[5] For example, it has been demonstrated that when acetaminophen (found in pain relievers) combines with hypochlorite (used in wastewater disinfection), two new toxic chemicals, 1,4-benzoquinone and *N*-acetyl-*p*-benzoquinone imine, are created. *See* http://pubs.acs.org/doi/abs/10.1021/es0509073.

Furthermore, it is plainly unreasonable to equate maintenance of water quality with maintenance of water quality *standards*, when so many of the components of the discharges in question are not even subject to *any* water quality standards. Moreover, the biological assessments BMP does not proactively protect against adverse effects on species, rather it would only address such effects *after* they had already occurred.

Please further explain the basis for your conclusion that it is possible to fully mitigate the impact of known and unknown chemicals on biological resources when some of these impacts are not yet known to science. Although the particular impacts of individual unknown chemicals may not yet be understood, in light of the scientific evidence discussed in the first section it is clear that these chemicals *will* have harmful effects on biological resources and these impacts should either be mitigated to insignificance or deemed significant.

The determination that Hazards and Hazardous Materials Impact 7(b) is less than significant is also not supported by the evidence. The discussion contains a number of references to as-yet-undefined mitigation measures.[6] We would appreciate clarification of specific measures included in the amendment to Regional Water Board Order No. 93-61, *General NPDES Permit/Waste Discharge Requirements for Discharges of Groundwater to Surface Water Related to Construction and Subsurface Seepage Dewatering Activities in the North Coast Region*, if it is to be relied on as a mitigation strategy.

The analysis of Hydrology and Water Quality Impacts 8(a), 8(e), and 8(f), all determined to be "less than significant," is similarly lacking:

- 8(a) claims that water quality and waste discharge requirements will not be violated, but there is no discussion of why the discharge of emerging contaminants is not in violation of the Porter-Cologne Water Quality Control Act. Please clarify this inconsistency, especially in light of the observation on page 8 of the Draft Staff Report that "almost all water has some small amount of pollutants, and would be considered the discharge of a waste under the Porter-Cologne Water Quality Act."

- 8(e) claims that the Amendment will not provide substantial additional sources of polluted runoff, because (1) discharges are already occurring, and (2) the discharges are not "polluted" because they meet water quality standards. The latter half of this argument is unsupported for reasons discussed above; no one can say with any amount of confidence how polluted, if at all, the wastewater is, because we know so little about what is in it. Although it is true that unauthorized

[6] For example, it states that in the amendment to Regional Water Board Order No. 93-61, "additional precautions will be required to ensure that any pumping near a contaminated site does not have the inadvertent effect of drawing in groundwater pollutants," but does not specify what these additional precautions are. This delayed mitigation strategy is not permitted by CEQA.

discharges currently occur, there is no attempt in the EA to quantify these unauthorized discharges, nor is there any attempt to quantify the amount of future "low impact" discharges, so it is impossible to say whether *additional* runoff will occur. It is not possible for the Board to individually review each permit so as not to increase the amount of water being discharged when it is not known how much runoff currently occurs.

- 8(f) claims that the Amendment will not "otherwise substantially degrade water quality," and, indeed, "will have a beneficial impact on water quality," because discharges are currently occurring but are unregulated. The Amendment will authorize discharges of partially treated wastewater. The Board itself claims that

> [S]ome municipalities within the North Coast Region have indicated that they are hesitant to pursue or expand water reuse (recycling) projects because it is technically a violation of the point source prohibitions for irrigation water . . . to discharge into a regulated storm drain and reach surface waters during the discharge prohibition season. . . . These municipalities are concerned that such activities could result in liability under the Clean Water Act, unless the Basin Plan is amended to provide exceptions to the Basin point source prohibitions.

Clearly the Amendment contemplates increased use of wastewater – otherwise why worry about the potentially chilling effect of legal liability? Please clarify how increased discharge of partially-treated wastewater containing unidentified emerging compounds will not degrade water quality.

Additionally, the determination that Land Use and Planning Impact 9(b) will be less than significant is also not properly explained. Currently, point source prohibitions in the Basin Plan prohibit all discharges for part of the year, and drastically limit discharges the remainder of the year. Appendix C states that "the original focus of the point source prohibitions was on discharges from municipal wastewater treatment facilities." Page 8 of the Staff Report notes that "the point source and one-percent prohibitions are intended to protect water quality and beneficial uses of the waterbodies in the North Coast Region." Pollution has a larger impact on rivers and streams during the summer, when flows are low. It is very difficult to see how the Amendment would not "[c]onflict with any applicable . . . regulation . . . adopted for the purpose of avoiding or mitigating an environmental effect," given that, as discussed above, there is no guarantee that water quality will actually be protected. Please expand your analysis of why the Amendment will not conflict with the point-source prohibitions currently in place.

Finally, the mandatory findings of significance are unsupported. The first, general, finding, is insufficient for the reasons discussed above: (1) no attempt is made to quantify existing unauthorized discharges or to predict the volume of

future discharges, so the Board's reliance on the existence of these unpermitted discharges is misplaced, and (2) it is impossible to be certain that the discharge of the unknown chemicals present in partially-treated wastewater will not have an adverse effect on the environment – indeed, the opposite is more likely true – so there is no guarantee that the discharges are in fact "low impact."

The analysis of cumulative impacts is also inadequate. Page 83 of the EA states:

> The increased use of recycled water within the North Coast region and statewide has raised concerns regarding the potential increased human and environmental exposure of chemicals related to personal products and pharmaceuticals. These products are not removed during wastewater treatment
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> . . . .
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> The implementation of this Basin Plan will not directly affect the issue of exposure to chemicals related to personal products and pharmaceuticals. Although this Basin Plan Amendment provides an exception to the Basin Plan for incidental runoff of recycled and potable irrigation water if certain conditions are met, it does not explicitly encourage recycled water use. The decision to implement recycled water projects, and the analysis and the mitigation of the environmental impacts of those decisions, are being made by individual municipalities. . . .

The EA then concludes that the cumulative impacts are less than significant. This conclusion is deficient for two reasons. First, the Amendment clearly contemplates an increased use of wastewater by municipalities in Sonoma County, as discussed above under Impact 8(f). The Board would not worry about the chilling effect of citizens' suits on the use of recycled water were it not planning for an increase in recycled water usage. In fact, the Board is currently considering issuing an MS4 permit to the City of Santa Rosa that would allow the discharge of recycled water. Moreover, the Board has not attempted to quantify existing unauthorized discharges or to estimate future discharges. While it may be true that the Amendment does not *explicitly encourage* recycled water use, it quite obviously is intended to permit the use of recycled water on a broader scale.

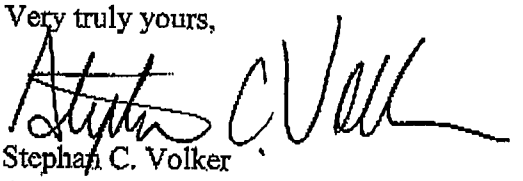
This leads us to our second concern – the failure to analyze cumulative impacts. This omission is a violation of CEQA. CEQA requires the consideration of reasonably foreseeable cumulative impacts. CEQA Guidelines § 15130. It is clearly foreseeable that, as a result of the Low Threat Discharge Amendment, municipalities and other organizations across Sonoma County will begin emitting Low Threat Discharges. Please attempt to quantify these discharges and fully analyze the cumulative impact that these unregulated chemicals will pose to our waters.

A further major problem with the EA is that it does not explain how the Board and its staff are going to ensure compliance with each of the myriad mitigation measures and requirements included in the Draft Report and EA. For example, the staff must review unplanned discharges ("non-storm water flows") so as to ensure that negligence is not responsible for the discharge [negligent discharges are not exempt from the point-source prohibition – see Report page 7]. It is not clear when this inquiry is going to take place. Will the Board review the incidental discharge in advance of the discharge? If so, how will the Board determine whether or not a future discharge was caused by a negligent act? If the Board is planning to review the unplanned discharges only *after* they take place, how can the Board ensure that water quality is protected after the fact?

Mandating requirements for unplanned activity is fraught with complexities. Please explain how the Board will ensure that compliance with all of the relevant non-storm water discharge requirements will be met by each individual discharge. Also, undertaking this time-consuming endeavor appears to undercut the putative cost advantage that the Recommended Alternative had over the other proposed Alternatives. Efficient use of staff time appears to be of extreme importance in the discussion of the other alternatives, yet the Amendment imposes enormous obligations on the Board's staff. This suggests that staff may not have the time to individually review each permit to ensure compliance with all of the mitigation measures and requirements discussed in the Draft Staff Report and EA.

Thank you for considering our comments on this important matter.

Very truly yours,



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